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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/107,230	06/30/1998	SANJAY AIYAGARI	CISCP047	7733
22434	7590	10/06/2003	EXAMINER	
BEYER WEAVER & THOMAS LLP P.O. BOX 778 BERKELEY, CA 94704-0778			HYUN, SOON D	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 10/06/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/107,230

Applicant(s)

AIYAGARI ET AL.

Examiner

Soon-Dong Hyun

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

1. Applicant's arguments with respect to claims 1-16, 19 and 20 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-16, 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 11, 19, and 20, respectively, it is not clear what is meant by "employing (to employ for claim 19) the field for transmission of a portion of the payload data."

With reference to specification page 1, line 37-page 2, line 5, and FIG. 1 of the present application, "the payload data" is 96 bits (110) in the 97 bits of a payload block (108). Therefore, it is not clear whether one bit of the payload data, i.e., a portion of the payload data, is moved to the F/Z field (112) or not.

Regarding claim 14, it is not clear what is meant by "inserting a portion of the payload data stored in the field." Refer to the discussion for the claim 1, above.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-16, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior art (AAP) in view of (Vanden Heuvel et al (U.S. Patent No. 5,751,723).

Regarding claims 1, 8-11, 14, 19, and 20, AAP (Background of the Invention) discloses that a frame format of the standard HDSL is used for the SDSL technology, but the F/Z field of HDSL standard which reserved for use with standard T1 and E1 for loop identification and out-of-band signaling for the transmission of special alarm codes which are only applicable to T1 and E1 transmissions (Specification page 2, lines 28-32)

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is not used for extra payload transmission. AAP further discloses that when the frame format of HDSL standard is used for the SDSL technology which is well-known in the art, the data in the F/Z field is meaningless, because the SDSL does not interface with T1 or E1 technology (Specification page 2, line 37-page 3, line 1). Therefore, Modems used the SDSL have no need to insert the control data in the F/Z field when 97 bit of HDSL frame format is used, i.e., the F/Z field is an unused bit field for the SDSL.

Vanden Heuvel et al (Vanden) discloses that unused or vacant bits are used for extra data transmission, see col. 1, line 26-col. 3, line 45. Those of skill in the art would have been motivated to incorporate the concept of Vanden into the SDSL of AAP to utilize the unused bit of F/Z field for extra bandwidth. Therefore, it would have obvious to one having ordinary skill in the art to employ the F/Z field for transmission of extra payload data with the SDSL modems.

Regarding claim 2, FIG. 2 (prior art) of the present application further discloses the steps of:

- receiving the payload data as a data stream with the first SDSL modem (204);
- generating a sequence of data frames in the HDSL frame format with the first SDSL modem; and

- transmitting the sequence of data frames to the second SDSL modem (206).

Regarding claim 5, FIG. 2 (prior art) further comprising:

- receiving the payload data as a sequence of data frames in the HDSL frame format from the first SDSL modem with the second SDSL modem; and

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decomposing the sequence of data frames into a data stream, with the second SDSL modem.

Regarding claims 3, 4, 6, 7, 12, 13, 15, and 16, refer to the discussion for the claims 1, 11, and 14. It would have been obvious to one having ordinary skill in the art to use an F/Z register of the SDSL modem when the F/Z field is employed for transmission of extra payload data as discussed above to save extra circuitry for the transmission of extra payload data, because the extra payload data is inserted into the F/Z field without changing the frame size.

### **Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Soon-Dong Hyun whose telephone number is (703) 305-4550. The examiner can normally be reached on Monday-Friday from 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen, can be reached on (703) 308-5340.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

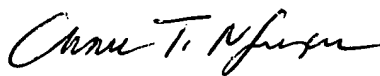
8. Any response to this action should be mailed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Or faxed to: 703-872-9306 for formal communications intended for entry with a label of "OFFICIAL" and for informal or draft communications with a label of "PROPOSED" or "DRAFT" (attn: Art Unit 2663, Soon-Dong Hyun).

  
S. Hyun

9/23/2003



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SUPERVISORY PATENT EXAMINER  
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